APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,948	07/17/2003	Herman Dietrich Dierks JR.	AUS920030470US1	1548

35525 7590 07/26/2007	EXAMINER
IBM CORP (YA)	PARK, ILWOO
C/O YEE & ASSOCIATES PC	

ART UNIT	PAPER NUMBER
2182	

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MAIL DATE	DELIVERY MODE
07/26/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _07 May 2007_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1,4-6,9,12-14 and 17-20_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1,4-6,9,12-14 and 17-20_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on

5/7/2007 has been entered.

Response to Arguments

2.   Applicant's arguments filed 5/7/2007 have been fully considered but they are not

persuasive. In the Remarks, Applicant argues in substance that Webber does not teach

"setting a valid length indicator, wherein the valid length indicator is set to the amount of

data and wherein the network adapter outputs only the amount of data set by the valid

length indicator after the data has been transferred to the network adapter."

The Examiner respectfully disagrees. Webber teaches setting a valid length indicator

["given a length for the packet payload data" in col. 2, lines 32-35], wherein the valid

length indicator is set to the amount of data and wherein the network adapter outputs

only ["copy only the desired data into a packet buffer" in col. 1, lines 14-16] the amount

of data set by the valid length indicator after [col. 4, lines 36-40] the data has been

transferred to the network adapter.

3.   Claims 1, 6, 9, 14, and 17-20 are amended in response to the last office action.

Chen et al and Webber et al were cited in the last office action. The following rejections

now apply. Claims 1, 4-6, 9, 12-14, and 17-20 are presented for examination

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 1, 4-6, 9, 12-14, and 17-20 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Chen et al. [US 6,055,580] in view of Webber et al. [US 6,820,186

B2].

        As for claim 1, Chen et al teach a method in data processing system for

transferring [col. 7, lines 62-65] data from a memory [e.g., main memory 104, cache

105] to a network adapter [network interface card 124], the method comprising:

        receiving [col. 7, lines 62-65] a request to transfer data in the memory to a

network adapter;

        setting a transfer size to align [col. 3, lines 21-25; col. 3, lines 42-45; col. 9, lines

43-59] the data with a cache line size if the amount of data to be transferred is unequal

[col. 3, lines 17-21] to the cache line size, wherein an amount of data is less that or

equal to the transfer size, and wherein the amount of data to be transferred is in a frame

and has a frame size [conformed to PCI system's inherent use of memory line sizes and

boundaries, e.g., 32 bytes, during data transfers in col. 9, lines 27-30, col. 11, lines 12-

15 or packets in col. 7, lines 2-5 and NDIS packet descriptor (inherently having a packet

length) in col. 8, line 65-col. 9, line 6]; and

responsive to receiving the request, transferring to the network adapter an

amount of data equal to the transfer size ["memory line sizes" in col. 11, lines 12-15].

Specifically, Chen et al disclose the data from the memory to the network adapter

may contain not only data ["transfer packets" in col. 9, lines 1-4] for the network

transmission but also unwanted data for the network transmission [e.g., "various other

information" in col. 9, lines 1-4 or "extraneous data" in col. 9, lines 53-59]. However,

Chen et al do not explicitly disclose setting a valid length indicator, wherein the valid

length indicator is set to the amount of data and wherein the network adapter outputs

only the amount of data set by the valid length indicator after the data has been

transferred to the network adapter. Webber et al teach transferring data [col. 1, lines 5-

19] aligned with a cache line size from a memory to a network adapter in order to build

a packet payload to be transmitted on a network and further teach setting a valid length

indicator ["given a length for the packet payload data" in col. 2, lines 32-35], wherein the

valid length indicator is set to the amount of data and wherein the network adapter

outputs only ["copy only the desired data into a packet buffer" in col. 1, lines 14-16] the

amount of data set by the valid length indicator after [col. 4, lines 36-40] the data has

been transferred to the network adapter. At the time the invention was made, one of

ordinary skill in the art would have been motivated to combine the cited references

because they both teach transferring data from a memory to a network adapter for

outputting the data to the network and the Webber et al's teaching of a valid length

indicator indicating only the amount of data [packet payload] output to the network

would increase feasibility in building a network frame ["Ethernet packets" in col. 7, lines

2-4 of Chen et al].

6.   As for claim 4, Chen et al teach the cache line size is 2^n, wherein n is a positive

integer [col. 9, lines 29-30].

7.   As for claim 5, Chen et al teach the data is transferred from the memory to the

network adapter through a bridge chip [fig. 1].

8.   As for claim 6, Chen et al teach a method in data processing system for

transferring [col. 7, lines 62-65] data from a memory [e.g., main memory 104, cache

105] to a network adapter [network interface card 124], the method comprising:

        identifying [col. 8, lines 48-54] a frame size for a transfer of the data from the

memory to the network;

        setting [col. 9, lines 49-51] a length equal to a cache line size;

        if the frame size is divisible by a cache line size without a remainder, setting a

valid data length equal to the length field [col. 3, lines 39-45]; and

        if the frame size divided by the cache line size results in a remainder, setting a

valid data length equal to the length field [col. 3, lines 17-23; col. 3, lines 39-45],

wherein the length field is computed as length field = (FLOOR(frame size/CLS)+1)*CLS,

wherein CLS is the cache length size [e.g., 32 bytes = (FLOOR((2 bytes in portion 618

of fig. 6)/(32 bytes))+1)*(32 bytes); and

        initiating a transfer of the data from the memory to the network adapter [col. 7,

lines 58-65].

However, Chen et al do not explicitly disclose initiating the transfer using the valid data length and the length field, wherein the network adapter only outputs data identified by the valid data length. Webber et al teach transferring data [col. 1, lines 5-19] aligned with a cache line size from a memory to a network adapter in order to build a packet payload to be transmitted on a network and further teach transferring data from the memory to a network adapter using a valid length indicator and the length field ["given a length for the packet payload data" in col. 2, lines 32-35], wherein the network adapter only ["copy only the desired data into a packet buffer" in col. 1, lines 14-16] outputs data identified by the valid data length. At the time the invention was made, one of ordinary skill in the art would have been motivated to combine the cited references because they both teach transferring data from a memory to a network adapter for outputting the data to the network and the Webber et al's teaching of a valid length indicator indicating only the amount of data [packet payload] output to the network would increase feasibility in building a network frame ["Ethernet packets" in col. 7, lines 2-4 of Chen et al].

9.   As for claims 9 and 14, the combination of Chen et al and Webber et al teaches a method for transferring data from a memory to a network adapter [*supra*]. Accordingly Chen et al teach the means for performing this method. The present claim is rejected under the same basis.

10.   As for claims 12 and 13, the combination of Chen et al and Webber et al teaches the method for transferring data from a memory to a network adapter [*supra*]. Therefore, the present claims are rejected under the same basis

11.   As for claim 17, Chen et al teach a computer program product in a computer

readable recordable medium for transferring data from a memory [e.g., main memory

104, cache 105] to a network adapter [network interface card 124], the computer

program product comprising:

first instructions for receiving [col. 7, lines 62-65] a request to transfer data in the

memory to a network adapter; and

second instructions for setting a transfer size to align [col. 3, lines 21-25; col. 3,

lines 42-45; col. 9, lines 43-59] the data with a cache line size if the amount of data to

be transferred is unequal [col. 3, lines 17-21] to the cache line size, wherein an amount

of data is less that or equal to the transfer size, and wherein the amount of data to be

transferred is in a frame and has a frame size [conformed to PCI system's inherent use

of memory line sizes and boundaries, e.g., 32 bytes, during data transfers in col. 9, lines

27-30, col. 11, lines 12-15 or packets in col. 7, lines 2-5 and NDIS packet descriptor

(inherently having a packet length) in col. 8, line 65-col. 9, line 6]; and

fourth instructions for, responsive to receiving the request, transferring to the

network adapter an amount of data equal to the transfer size [["memory line sizes" in

col. 11, lines 12-15].

Specifically, Chen et al disclose the data from the memory to the network adapter

may contain not only data ["transfer packets" in col. 9, lines 1-4] for the network

transmission but also unwanted data for the network transmission [e.g., "various other

information" in col. 9, lines 1-4 or "extraneous data" in col. 9, lines 53-59]. However,

Chen et al do not explicitly disclose third instructions for setting a valid length indicator,

wherein the valid length indicator is set to the amount of data and wherein the network adapter outputs only the amount of data set by the valid length indicator after the data has been transferred to the network adapter. Webber et al teach transferring data [col. 1, lines 5-19] aligned with a cache line size from a memory to a network adapter in order to build a packet payload to be transmitted on a network and further teach setting a valid length indicator ["given a length for the packet payload data" in col. 2, lines 32-35], wherein the valid length indicator is set to the amount of data and wherein the network adapter outputs only ["copy only the desired data into a packet buffer" in col. 1, lines 14-16] the amount of data set by the valid length indicator after [col. 4, lines 36-40] the data has been transferred to the network adapter. At the time the invention was made, one of ordinary skill in the art would have been motivated to combine the cited references because they both teach transferring data from a memory to a network adapter for outputting the data to the network and the Webber et al's teaching of a valid length indicator indicating only the amount of data [packet payload] output to the network would increase feasibility in building a network frame ["Ethernet packets" in col. 7, lines 2-4 of Chen et al].

12.   As for claim 18, Chen et al teach a computer program product in a computer readable recordable medium for transferring data from a memory [e.g., main memory 104, cache 105] to a network adapter [network interface card 124], the computer program product comprising:

first instructions for identifying [col. 8, lines 48-54] a frame size for a transfer of the data from the memory to the network;

second instructions for setting [col. 9, lines 49-51] a length equal to a cache line

size;

if the frame size is divisible by a cache line size without a remainder, setting a

valid data length equal to the length field [col. 3, lines 39-45]; and

if the frame size divided by the cache line size results in a remainder, setting a

valid data length equal to the length field [col. 3, lines 17-23; col. 3, lines 39-45],

wherein the length field is computed as length field = (FLOOR(frame size/CLS)+1)*CLS,

wherein CLS is the cache length size [e.g., 32 bytes = (FLOOR((2 bytes in portion 618

of fig. 6)/(32 bytes))+1)*(32 bytes).for receiving [col. 7, lines 62-65] a request to transfer

data in the memory to a network adapter.

Specifically, Chen et al disclose the data from the memory to the network adapter

may contain not only data ["transfer packets" in col. 9, lines 1-4] for the network

transmission but also unwanted data for the network transmission [e.g., "various other

information" in col. 9, lines 1-4 or "extraneous data" in col. 9, lines 53-59]. However,

Chen et al do not explicitly disclose third instructions for setting a valid length indicator,

wherein the valid length indicator is set to the amount of data and wherein the network

adapter outputs only the amount of data set by the valid length indicator after the data

has been transferred to the network adapter. Webber et al teach transferring data [col.

1, lines 5-19] aligned with a cache line size from a memory to a network adapter in

order to build a packet payload to be transmitted on a network and further teach setting

a valid length indicator ["given a length for the packet payload data" in col. 2, lines 32-

35], wherein the valid length indicator is set to the amount of data and wherein the

network adapter outputs only ["copy only the desired data into a packet buffer" in col. 1, lines 14-16] the amount of data set by the valid length indicator after [col. 4, lines 36-40] the data has been transferred to the network adapter. At the time the invention was made, one of ordinary skill in the art would have been motivated to combine the cited references because they both teach transferring data from a memory to a network adapter for outputting the data to the network and the Webber et al's teaching of a valid length indicator indicating only the amount of data [packet payload] output to the network would increase feasibility in building a network frame ["Ethernet packets" in col. 7, lines 2-4 of Chen et al].

13.   As for claims 19 and 20, the combination of Chen et al and Webber et al teaches a method for transferring data from a memory to a network adapter [*supra*]. Therefore, the combination of Chen et al and Webber et al teaches the server for performing this method. The present claims are rejected under the same basis.

Conclusion

14.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ilwoo Park whose telephone number is (571) 272-4155. The examiner can normally be reached on Monday through Friday from 9:00 AM to 5:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Huynh can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published

applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free).

ILWOO PARK
PRIMARY EXAMINER

Ilwoo Park

July 13, 2007